

County of Loudoun
Office of Transportation Services
MEMORANDUM

DATE: April 13, 2009

TO: Nicole Steele, Project Manager, Department of Planning

FROM: Marc Lewis-DeGrace, Transportation Planner *MLDG*

THROUGH: Shaheer Assad, Senior Transportation Engineer/Planner *Assa*

SUBJECT: **SPEX 2008-0061, SPEX 2008-0062 CMPT 2008-0020**
White's Ford Park

Background

This application consists of three separate applications all concerning a proposed regional park administered by the Northern Virginia Regional Park Authority (NVRPA). In its consideration of this application, OTS reviewed a Statement of Justification dated November 26, 2008 and a traffic study, dated November 25, 2008, prepared by Gorove/Slade Associates.

The site is approximately 275 acres and is located north and south of Hibler Road (Route 656) between Harrison Hill Lane and the Potomac River. The site will have access from Hibler Road, which will connect to James Monroe Highway (US Route 15) via Limestone School Road (Route 661) and Spinks Ferry Road (Route 657).

The proposed park land is currently zoned Agricultural Rural – 1 (AR-1). The proposed park will be implemented in two phases, the first will include the installation of a boat launch, and camping facilities and will be completed by 2015. The second phase will include equestrian trail facilities that will be completed at a future date not yet determined.

The proposed development does not seek to change the current zoning AR-1, and “community, neighborhood, or regional park, active recreational uses” are permitted by the Revised 1993 Loudoun County Zoning Ordinance. The boat launch, which will be constructed along the Potomac River and along the camping facilities, will each require a special exception.

Existing, Planned and Programmed Roads

US Route 15 (James Monroe Highway) is a two-lane rural highway. It serves heavy commuter traffic during peak hours. The proposed main entrance for the White's Ford Park at US 15 and

Limestone School Road has recently been improved by the Virginia Department of Transportation (VDOT). There is a left-turn lane for southbound traffic on US 15 turning onto Limestone School Road and a paved shoulder for northbound traffic on US 15 turning onto Limestone School Road. According to the most recent data provided by VDOT (2007) this section of US 15 carried 21,000 vehicles per day. The Countywide Transportation Plan (CTP) makes no mention of Limestone School Road or Hibler Road. The CTP states that there are no planned improvements to this section of US 15.

Limestone School Road (Route 661) is a narrow unpaved road that is approximately 20 feet wide with no shoulders. According to the most recent data provided by VDOT (2005), this section of Route 661 carries 520 vehicles per day.

Hibler Road (Route 656) is a narrow unpaved road that is approximately 20 feet wide with no shoulders. According to the most recent data provided by VDOT, this section of Route 656 carries 150 vehicles per day.

Existing and Forecasted Traffic Volumes and Levels of Service

The traffic impact analysis that was provided to OTS shows that the existing intersection of US 15 and Limestone School Road will not be adversely affected by the proposed development. Based on 2008 field observations and traffic counts, the westbound approach (Limestone School Road approaching US 15) is at a failing level-of-service (LOS) F in the AM and PM peak hours. The southbound left-turn movement (US 15 south turning onto Limestone School Road) is at an acceptable LOS in the AM peak hour (LOS A) and also in the PM peak hour (LOS B). Existing LOS are shown below.

Existing (2008) Intersection Capacity Analysis

Intersection (Approach/Movement)	Existing Conditions			
	AM Peak Hour		PM Peak Hour	
	LOS	Delay	LOS	Delay
US Route 15 and Limestone School Road				
Overall Intersection (Unsignalized)	N/A	N/A	N/A	N/A
Westbound Approach	F	55.6	F	60.2
Southbound Left Turn Movement	A	8.4	B	11.1

Source: Gorove/Slade Associates.

Using Institute of Transportation Engineers (ITE) guidelines for trip generation, the traffic consultant forecasts minimal impact on the existing road network during weekday peak hours. Using ITE trip generation code 417 (Regional Park), it is forecast that the site will generate 160 daily weekday trips, including 15 vehicle trips in the AM peak hour and 26 vehicle trips in the PM peak hour. A summary of trip generation, as well as future conditions at the intersection of US 15 and Limestone School Road are included below.

Proposed Trip Generation based on ITE Standards

Land Use	ITE Code	Size	Weekday							Weekend							
			AM Peak Hour			PM Peak Hour			Daily	Saturday Peak Hour			Daily	Sunday Peak Hour			Daily
			In	Out	Total	In	Out	Total	Total	In	Out	Total	Total	In	Out	Total	Total
Regional Park	417	2 Employees	9	6	15	12	14	26	160	17	17	34	257	14	27	41	326

Source: Gorove/Slade Associates.

Future Conditions with Development (2015) Intersection Analysis

Intersection (Approach/Movement)	Future Conditions with Development (2015)				
	AM Peak Hour			PM Peak Hour	
	LOS	Delay		LOS	Delay
US Route 15 and Limestone School Road					
Overall Intersection (Unsignalized)	N/A	N/A		N/A	N/A
Westbound Approach	F	150.7		F	168.4
Southbound Left Turn Movement	A	8.7		B	13.1

Transportation Comments

The Office of Transportation Services (OTS) references for this plan are the CTP and The Loudoun County Facilities Standards Manual (FSM). OTS has reviewed the plans and we have the following comments:

1. It is not clear from the traffic study whether the applicant is seeking approval for any Phase II uses. The study indicates that these activities have not been "finally determined," and also states that no additional traffic is anticipated. However, depending on what uses are proposed, this may or may not be the case. Please clarify.
2. Gorove/Slade notes that existing traffic counts were conducted on Tuesday, November 11, 2008 a federal holiday. In addition, additional "spot counts" were conducted on November 18, 2008 in order adjust the counts conducted on the 11th. OTS questions why 1) Gorove/Slade chose to conduct traffic counts on a federal holiday; 2) how the "spot counts" were used to adjust the original counts; and 3) why new AM and PM peak hour counts were not conducted.
3. OTS is concerned about the unacceptable LOS on westbound Limestone School Road at US 15. The traffic generated by the proposed uses will exacerbate this situation. OTS recommends that the applicant make a fair share contribution for the purpose of constructing a traffic signal at this intersection when warranted. Preliminary calculations indicate that this contribution should be approximately 16% of the cost of the traffic signal at the time of construction. OTS is available to discuss this issue further with the applicant.
4. Gorove/Slade provides a signal warrant analysis in Appendix H of the TIA. This signal warrant analysis is based on "Estimated Average Daily Traffic" ("To be used only for NEW INTERSECTIONS or other locations where actual traffic volumes cannot be counted.") The volumes used in this analysis appear to be less than actual existing counts

from several years ago as provided in the traffic study. The analysis should reflect projected conditions at site buildout. Please explain the methodology used for this analysis.

5. The applicant notes in their Traffic Impact Analysis (TIA) that a right-turn taper is warranted on northbound US 15 (Appendix H). The applicant should construct the warranted taper.
6. There are several stream crossings along the roadways leading to the proposed site. In particular, OTS is concerned that the one-lane bridge stream crossing on Limestone School Road (west of Temple Hall Lane) will cause conflicts with opposing traffic towing boats. The applicant should work with VDOT to ensure that the traffic generated by the proposed uses has no adverse impact on the operation of the local road network, particularly with respect to these crossings. One option to address the one-lane bridge concerns may be to investigate having park patrons enter the park via Limestone School Road and exit via Spinks Ferry Road. Such a traffic management scheme could potentially improve the LOS at Limestone School Road and reduce conflicts at the above mentioned bridges. However, changes to the traffic management scheme would necessitate the applicant revise the TIA and investigate the LOS at Spinks Ferry Road. Further discussion with VDOT is necessary.
7. OTS recommends that the applicant ensure there is adequate parking within the proposed park. As noted by the applicant in its special exception plat, specific number and location of parking spaces will be determined at site plan approval. OTS will defer to the Department of Building and Development (Zoning Administration) for their findings and recommendations.
8. The applicant notes in their TIA, in Appendix A, that no Recreational vehicles or 5th-wheel trailers will be allowed in the park. OTS welcomes this restriction and believes that this should be included as a condition for approval.
9. OTS recommends that the applicant ensure that the future road connecting existing Hibler Road to the proposed boat launch be built to private road standards as established by the FSM. OTS defers to the Department of Building and Development (Zoning Administration) for their findings and recommendations on the road classifications.
10. OTS recommends that the applicant ensure that all internal roads and existing Hibler Road are upgraded or built to FSM standards to provide safe pedestrian and horse crossings.

Conclusion

The Office of Transportation Services may have additional comments after first submission responses are provided.